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Lannion (FR). LE TOURNEUR, Grégoire [FR/FR]; Ker Noel, F-22700 Saint-Quay-Perros (FR). THOMAS, Jean-Philippe [FR/FR]; 8, rue Kergall, F-22660 Trevou Treguignec (FR).

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(74) Mandataire : SAURA, Robert; France Telecom/T & I/PTV/PI, 38-40, rue du Général Leclerc, F-92794 Issy Moulineaux Cedex 9 (FR).

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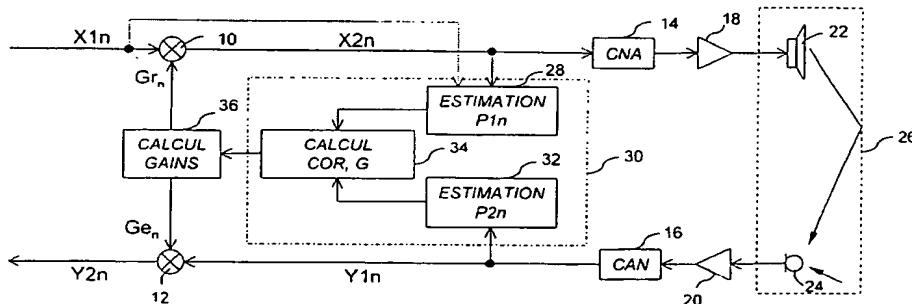
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F-75015 Paris (FR).

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(54) Title: ECHO PROCESSING DEVICES FOR SINGLE-CHANNEL OR MULTICHANNEL COMMUNICATION SYSTEMS

(54) Titre : DISPOSITIFS DE TRAITEMENT D'ECHO POUR SYSTEMES DE COMMUNICATION DE TYPE MONOVOIE OU MULTIVOIES



36...COMPUTING GAINS

34...COMPUTING COUPLING VARIABLE

26...ESTIMATING INPUT SIGNAL (X2N) AND/OR DIRECT SIGNAL (X1N) INSTANTANEOUS POWER

32...ESTIMATING OUTPUT SIGNAL (Y1N) INSTANTANEOUS POWER

14...DIGITAL-TO-ANALOG CONVERTER

16...ANALOG-TO-DIGITAL CONVERTER

(57) **Abstract:** The invention concerns an echo processing device for attenuating in a return signal Y2n echo components of a direct signal X1n, comprising reception and transmission gain Gr_n , Ge_n computing means (36); first gain applying means (10) for applying the reception gain Gr_n to the direct signal and for producing an input signal X2n transmitted in an echo generating system (26); second gain applying means (12) for applying the transmission gain Ge_n to an output signal Y1 derived from the echo generating system (26) and for producing the return signal Y2n. Said device further comprises means for computing (30) a coupling variable, COR, characteristic of the acoustic coupling existing between the direct signal X1n or the input signal X2n and the output signal Y1n; the gain computing means (36) are designed to calculate the reception and transmission gains Gr_n , Ge_n on the basis of said coupling variable. The invention is also applicable to multichannel systems.

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ABSTRACT

ECHO PROCESSING DEVICES FOR SINGLE-CHANNEL OR
MULTICHANNEL COMMUNICATIONS SYSTEMS

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An echo processing device for attenuating echo components of a direct signal X_{1n} in a return signal Y_{2n} comprises: means for calculating a receive gain G_{r_n} and a send gain G_{e_n} ; first gain application means for applying the receive gain G_{r_n} to the direct signal and producing an input signal X_{2n} emitted into an echo generator system; and second gain application means for applying the send gain G_{e_n} to an output signal Y_{1n} from the echo generator system and producing the return signal Y_{2n} ; said device further comprises means for calculating a coupling variable COR characteristic of the acoustic coupling between the direct signal X_{1n} or the input signal X_{2n} and the output signal Y_{1n} , and said gain calculation means are adapted to calculate the receive gain G_{r_n} and the send gain G_{e_n} on the basis of said coupling variable. The invention also applies to multichannel systems.

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